

In the Claims

1. (Original) A conjugate for mediating a cell-specific, compartment-specific or membrane-specific transport, wherein the conjugate comprises the following components:

a transport mediator for the cell membrane,

a cell-specific, compartment-specific or membrane-specific address protein or peptide;

and

an active substance to be transported.

2. (Original) The conjugate according to claim 1, wherein the transport mediator is a peptide or protein which can pass through the plasma membrane.

3. (Previously amended) The conjugate according to claim 1, wherein the transport mediator is a member selected from the group consisting of: a penetratin, a penetratin derivative, transportan or parts thereof, bacterial transport protein and viral transport protein.

4. (Original) The conjugate according to claim 3, wherein one of the penetratins has the following sequence:

NH₂-RQIKIWFQNRRMKWKK

5. (Previously amended) The conjugate according to claim 1, wherein the cell-specific, compartment-specific or membrane-specific address protein or peptide is selected from the group consisting of:

for import into the ER

H₃N⁺-Net-Met-Ser-Phe-Val-

Ser-Leu-Leu-Leu-Val-Gly-

Ile-Leu-Phe-Trp-Ala~Thr

Clu-Ala-Clu-Gln-Leu-Thr

Lys-Cys-Glu-Val-Phe-Gln

for import into mitochondria H_3N^+ -Met-Leu-Ser-Leu-Arg-
Gln-Ser-Ile-Arg-Phe-Phe-
Lys-Pro-Ala-Thr-Arg-Thr-
Leu-Cys-Ser-Ser-Arg-Tyr-
Leu-Leu

H3N⁺-Pro-Lys-Lys-Lys-Arg
Lys-Val(= nuclear localization sequence from
SV4Q-T antigen)

for binding to cell membrane H_3N^+ -Gly-Ser-Ser-Lys-Ser-Lys-Pro-Lys

$$\text{H}_3\text{N}^+ \text{-Pro-Lys-Lys-Lys-Arg-Lys-Val.}$$

8. (Previously amended) The conjugate according to claim 1, wherein the conjugate has the following structure:

9. (Previously amended) The conjugate according to claim 1, wherein a spacer is also present, if applicable.

10. (Original) The conjugate according to claim 9, wherein the spacer is located between the address protein and the active substance.

11. (Previously amended) The conjugate according to claim 9, wherein the spacer is a member selected from the group consisting of: polylysine, polyethylene glycol or polyvinyl pyrrolidone.

12. (Previously amended) A method of preparing a conjugate according to claim 1, comprising the steps of:

- 1) synthesizing separate peptides of "P", "AP",
- 2) forming a covalent bond between "AP" and active substance,
- 3) redox coupling of the product from step 2) with "P" by means of redox coupling.

13. (Original) The method according to claim 12, wherein the peptide synthesis is carried out according to the known Merrifield method.

14. (Previously amended) The method according to claim 12, wherein the redox coupling is carried out in an aqueous DMSO solution.

15. (Previously amended) The method according to claim 14, wherein a further purification step follows.

16. (Original) The method according to claim 15, wherein purification takes place by means of HPLC.

17. (Previously amended) Use of a conjugate according to claim 1 for the cell-specific, compartment-specific or membrane-specific transport of a desired active substance.

18. (Original) Use according to claim 17 for use in diagnosis and/or therapy.

19. (Previously added) The method according to claim 12, further comprising: synthesizing a spacer to be covalently bonded between "AP" and active substance.

20. (New) The conjugate according to claim 1, wherein the cell-specific, compartment-specific address protein is a nuclear localization sequence from SV40-T antigen.